

## Fluidized-bed reactor process with inhomogeneous temperature distribution

5    **Abstract**

The invention relates to a process for carrying out exothermic chemical equilibrium reactions in a fluidized-bed reactor, wherein there is a temperature distribution in the fluidized bed of the fluidized-bed reactor and the temperature difference  
10    between the lowest temperature and the highest temperature is at least 10 K. The invention further relates to a fluidized-bed reactor for carrying out chemical reactions in a fluidized bed (5), wherein at least one heat exchanger (12, 28) is located in the fluidized bed (5) to control the temperature distribution.

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(Figure 1)